

WHAT IS CLAIMED IS:

1. A method for detecting spam, comprising:  
identifying normal users visiting a web site; and  
determining an occurrence of spamming on the web site based at least in part on  
the identified normal users.
2. The method of claim 1 wherein the identifying normal users includes:  
tracking activities of users visiting the web site.
3. The method of claim 2 wherein the tracking activities includes:  
determining whether the users load images.
4. The method of claim 2 wherein the tracking activities includes:  
determining whether the users have javascript turned on.
5. The method of claim 2 wherein the tracking activities includes:  
determining a type of browser used by the users.
6. The method of claim 2 wherein the tracking activities includes:  
determining an interval at which each of the users visits the web site.

7. The method of claim 2 wherein the web site is a search engine, and

wherein the tracking activities includes:

determining a type of items for which searches are performed by the users.

8. The method of claim 2 wherein the tracking activities includes:

tracking activities of users visiting another web site.

9. The method of claim 2 wherein each of the users is associated with a cookie

identifier, and

wherein the tracking includes:

using the cookie identifiers to track the activities of the users.

10. The method of claim 1 wherein each of the users is associated with a cookie

identifier, and

wherein the identifying normal users includes:

identifying normal users based at least in part on an age of the cookie

identifiers associated with the users.

11. The method of claim 1 wherein each of the users is associated with a network

address, and

wherein the identifying normal users includes:

identifying the normal users based at least in part on the network addresses associated with the users.

12. The method of claim 1 wherein the web site includes at least one advertisement,  
and

wherein the determining an occurrence of spamming includes:

determining a click rate of the at least one advertisement for the identified  
normal users, and

determining that the at least one advertisement has been spammed when  
the click rate of users visiting the web site exceeds the determined click rate for the identified  
normal users.

13. The method of claim 12 wherein the click rate includes a range of click rates.

14. The method of claim 1 wherein the web site includes at least one advertisement,  
wherein the identifying includes:

determining a percentage of a number of users visiting the web site in a  
time period that are normal users, and

wherein determining an occurrence of spamming includes:

estimating a percentage of normal users selecting the at least one  
advertisement during the time period to be approximately the percentage of normal users visiting

the web site during the time period, and

determining that the at least one advertisement has been spammed when an actual percentage of normal users selecting the at least one advertisement during the time period is lower than the estimated percentage of normal users selecting the at least one advertisement during the time period.

15. The method of claim 1 wherein the determining includes:

determining an occurrence of spamming of at least one advertisement on the web site, and

wherein the method further comprises:

providing a refund in response to determining that the at least one advertisement has been spammed.

16. A system for detecting click spam at a web site, comprising:

means for identifying normal users visiting a web site; and

means for determining an occurrence of click spamming on the web site based at least in part on a behavior of the identified normal users.

17. A computer-readable medium containing instructions for controlling at least one processor to perform a method for detecting click spamming of an advertisement on a server, the method comprising:

determining a number of normal users accessing the server;

determining a percentage of the normal users clicking the advertisement when the advertisement is displayed to the normal users; and

determining whether the advertisement has been click spammed based at least in part on the determined percentage.

18. A server comprising:

a memory configured to store at least one advertisement; and

a processor configured to:

cause the at least one advertisement to be displayed,

determine a number of normal users accessing the server,

determine a percentage of the normal users clicking the at least one advertisement, and

determine whether the advertisement has been click spammed based at least in part on the determined percentage.

19. A method for determining whether an item on a web site has been click spammed, comprising:

identifying a group of normal users visiting the web site;

determining a click rate of the item for the group of normal users; and

determining whether the item has been click spammed based at least in part on the

determined click rate for the normal users.

20. The method of claim 19 further comprising:

determining a total number of users visiting the web site, and

wherein the determining whether the item has been click spammed includes:

comparing the determined click rate for the normal users to a click rate for

the total number of users visiting the web site, and

determining that the item has been click spammed when the click rate for

the total number of users exceeds the determined click rate for the normal users.

21. The method of claim 19 wherein the identifying includes:

tracking an activity of users visiting the web site, and

identifying the group of normal users based at least in part on the tracked activity.

22. The method of claim 21 wherein the tracking includes determining, for each user,

at least one of whether the user loads images, an age of a cookie associated with each user,

whether the user has javascript turned on, a type of browser used by the user, and an interval at

which the user visits the web site.

23. The method of claim 19 further comprising:

taking remedial measures in response to determining that the item has been click

spammed.

24. The method of claim 19 wherein the determining a click rate of the item for the group of normal users includes:

estimating a percentage of normal users visiting the web site, and

setting a percentage of clicks of the item from normal users to approximately equal the estimated percentage.

25. The method of claim 24 wherein the determining whether the item has been click spammed includes:

determining whether an actual click rate of the item for the group of normal users differs from the set click rate.

26. The method of claim 19 wherein the determining a click rate of the item includes:  
determining different click rates of the item for the group of normal users, the different click rates corresponding to different time periods.

27. The method of claim 26 wherein the different time periods include different times of a day or week.

28. The method of claim 26 wherein the different time periods include different

*months of a year.*

29. A computer-readable medium containing instructions for controlling at least one processor to perform a method for detecting a spamming of an advertisement displayed by a server, the method comprising:

identifying normal users visiting the server;

determining a click rate of the advertisement for the normal users; and

determining whether the advertisement has been spammed based at least in part on the determined click rate for the normal users.

30. A server comprising:

a memory configured to store at least one item; and

a processor configured to:

cause the at least one item to be displayed,

identify a number of normal users accessing the server,

compare the number of normal users to a total number of users to obtain a percentage,

set a click rate of the at least one item based at least in part on the percentage, and

determine whether the at least one item has been spammed based at least in part on the click rate.



31. A method for identifying normal users visiting a web site, comprising:
- tracking activities of users visiting the web site, the tracking including determining, for each user, at least one of whether the user loads images, an age of a cookie associated with each user, whether the user has javascript turned on, a type of browser used by the user, and an interval at which the user visits the web site; and
- identifying normal users based at least in part on the tracked activities.